Recommendation 3.1 Evidence Profile

Recommendation question: Should a formal interprofessional cross-sectoral approach be recommended or not to support persons encountering a transition in care?

Recommendation 3.1: The expert panel suggests that health and social service organizations collaborate to implement a formal interprofessional cross-sectoral approach to support persons encountering transitions in care.

Population: Adult & pediatric populations experiencing a transition in care
Intervention: A formal interprofessional cross-sectoral approach
Comparison: No formal interprofessional cross-sectoral approach
Outcomes: Follow-visit with a health or social service provider [critical], emergency department (ED) visits (within 30 days of a transition in care) [critical], patient quality of life (QOL) [critical, based on systematic observation], patient satisfaction [critical, based on systematic observation], readmission rates (within 30 days of a transition in care) [critical]

Setting: Any setting where a person receives care or services during a transition in care

Bibliography: 507, 2245, 3194, 3272, 10018, 19025

Quality assessment							Study details		No. of Participants		Reported Effects/ Outcomes	Certainty	Reference
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
Follow-up visit with a health or social service provider (measured using data collected from the hospital's electronic data repository and national electronic health records [NEHR])													
1	RCT	Not serious [a]	Not serious	Not serious	Not serious	Undetected	507: Singapore	507: **Intervention**: Participants (21 years and older) at high risk of readmission received pre-hospital discharge transitional care through an integrated practice unit, which was comprised of an inpatient care team and an outpatient virtual ward team. Pre-discharge transitional support provided by the inpatient team included discharge planning, med reconciliation, self-management coaching, scheduling follow-ups, and sharing of contact info for the virtual ward nurse. The virtual ward team closely monitored persons for 3 months and conducted a telephone review within 72 hours of discharge, home assessment and regular telephone reviews to identify early complications. **Control:** Patients received standard hospital care which included a copy of hospital discharge summary	507: N= 420 *Specific details regarding the number of outpatient specialist clinic visits for the intervention and control groups were not provided in the study.	507: N=420	507: Overall, the study reported more specialist clinic visits within the intervention group compared to the control group, within 30 days of hospital discharge. Outpatient specialist clinic visits: IRR (95% CI) 1.54 (1.31, 1.82)	⊕⊕⊕◯ Moderate	507: Low et al., 2017

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№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
								listing their diagnosis and medications, and a scheduled follow-up with a primary care provider or specialist, as necessary.					
ED visits (within 30 days of a transition in care) (measured using data collected from the hospital's electronic data repository and national electronic health records [NEHR])													
1	RCT	Not serious [a]	Not serious	Not serious	Not serious	Undetected	507: Singapore	507: **Intervention**: Participants (21 years and older) at high risk of readmission received pre-hospital discharge transitional care through an integrated practice unit, which was comprised of an inpatient care team and an outpatient virtual ward team. Pre-discharge transitional support provided by the inpatient team included discharge planning, med reconciliation, self-management coaching, scheduling follow-ups, and sharing of contact info for the virtual ward nurse. The virtual ward team closely monitored persons for 3 months and conducted a telephone review within 72 hours of discharge, home assessment and regular telephone reviews to identify early complications. **Control:** Patients received standard hospital care which included a copy of hospital discharge summary listing their diagnosis and medications and a scheduled follow-up with a primary care provider or specialist, as necessary.	507: N= 420 ED visits within 30 days of hospital discharge Mean (SD) = 0.26 (0.51)	507: N=420 ED visits within 30 days of hospital discharge Mean (SD) = 0.43 (1.16)	507: The study reported a 40% reduction in 30-day ED visits for patients in the intervention group compared to the control group. IRR (95% CI) 0.60 (0.46, 0.79)	⊕⊕⊕◯ Moderate	507: Low et al., 2017
1	Non-RCT	Serious [b]	Not serious	Not serious	Serious [c]	Undetected	3194: Italy	3194: **Intervention:** The Careggi Re-Engineered Discharge (CaRED) intervention was designed to support adults transitioning home from a high complexity medicine ward in a teaching hospital. CaRED is a restructured discharge protocol,	3194: Pre-intervention: N=832 # of ED visits within 30 days of discharge: 83 (11.6%)	3194: No true control group	3194: No important differences were observed for ED within 30 days visits in the pre- and post-	⊕◯◯◯ Very Low	3194: Paolini et al., 2022

Quality assessment							Study details		No. of Participants		Reported Effects/ Outcomes	Certainty	Reference
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
								that involves direct communication between hospitals and general practitioners (GP) in primary care. GPs received an email informing them that one of their patients was hospitalized. The email authorized the GP to access the teaching hospital electronic health record throughout the patient's hospitalization. The GPs had also a chat available to directly contact and discuss health data and healthcare decisions with hospital staff. At discharge, GPs received an e-mail with the discharge letter, directly alerting them of the discharge. **Control:** There was no control group, and results were compared pre and post intervention.	Post-intervention: N=717 # of ED visits within 30 days of discharge: 86 (10.3%)		intervention periods.		
Patient QOL (Measured using survey data collected from the expert panel using a systematic observation form)													
1	Systematic observation	Very serious [d]	Serious [e]	Not serious	Very serious [f]	Undetected	Canada	A formal interprofessional cross-sectoral approach to support persons during transitions in care Most panel members reported observations from their experiences working in hospitals where a formal process was in place to support transitions in care.	N/A	N/A	13 expert panel members reported on this outcome based on their experiences and observations related to a formal interprofessional cross-sectoral approach being used to support persons during transitions in care. Nine expert panel members (69.2%) reported that interprofessional collaboration across settings improves patient QOL.	⊕◯◯◯ Very Low	N/A

Quality assessment							Study details		No. of Participants		Reported Effects/ Outcomes	Certainty	Reference
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
											Two expert panel members (15.4%) reported no change in QOL. One expert panel member (7.7%) reported a reduction in QOL. One panel member (7.7%) could not provide information on this outcome.		
Patient satisfaction (Measured using survey data collected from the expert panel using a systematic observation form)													
1	Systematic Observation	Very serious [d]	Serious [e]	Not serious	Very serious [f]	Undetected	Canada	A formal interprofessional cross-sectoral approach to support persons during transitions in care Most panel members reported observations from their experiences working in hospitals where a formal process was in place to support transitions in care.	N/A	N/A	13 expert panel members reported on this outcome based on their experiences and observations related to a formal interprofessional cross-sectoral approach being used to support persons during transitions in care. Eight expert panel members (61.6%) reported that interprofessional collaboration across settings improves patient satisfaction. Two expert panel members (15.4%) reported a reduction in patient satisfaction.	⊕◯◯◯ Very Low	N/A

Quality assessment							Study details		No. of Participants		Reported Effects/ Outcomes	Certainty	Reference
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
											Three panel members (23.1%) could not provide information on this outcome.		
Readmission rates (within 30 days of a transition in care) (measured using data collected from hospital electronic data repository and National Electronic Health Records [NEHR], hospital information technology systems, hospital databases and claims data)													
1	RCT	Not serious [a]	Not serious	Not serious	Not serious [g]	Undetected	507: Singapore	**507: Intervention**: Participants (21 years and older) at high risk of readmission received pre-hospital discharge transitional care through an integrated practice unit, which was comprised of an inpatient care team and an outpatient virtual ward team. Pre-discharge transitional support provided by the inpatient team included discharge planning, med reconciliation, self-management coaching, scheduling follow-ups, and sharing of contact info for the virtual ward nurse. The virtual ward team closely monitored persons for 3 months and conducted a telephone review within 72 hours of discharge, home assessment and regular telephone reviews to identify early complications. **Control:** Patients received standard hospital care which included a copy of hospital discharge summary listing their diagnosis and medications, and a scheduled follow-up with a primary care provider or specialist, as necessary.	507: N=420 Readmission rates within 30 days of hospital discharge Mean (SD) = 0.25 (0.54)	507: N=420 Readmission rates within 30 days of hospital discharge Mean (SD) = 0.38 (0.63)	507: The study reported a very small 33% reduction in 30-day readmissions in the intervention group compared to the control group. The average hospital readmission per patient reduced from 0.38 in the control group to 0.25 in the intervention group. IRR (95% CI) 0.67 (0.52, 0.86)	⊕⊕⊕◯ Moderate	507: Low et al., 2017
4	Non-RCTs	Very serious [h]	Very Serious [i]	Not serious	Not Serious	Undetected					Two out of four non-RCT studies reported lower 30-day readmission rates, one study reported a trend	⊕◯◯◯ Very low	

Quality assessment							Study details		No. of Participants		Reported Effects/ Outcomes	Certainty	Reference
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
											towards an increase in 30-day readmissions, and one study reported no important differences when a formal interprofessional cross-sectoral approach was used to support persons during transitions in care.		
							3272: USA	3272:**Intervention:** The Health Optimization Program for Elders (HOPE) for high-risk older adults transitioning from a hospital to a rehabilitation facility. The HOPE team at the hospital [led by a nurse practitioner (NP)] conducted a one-time inpatient consultation. Then, approximately 72 hours after the transition, the NP communicated with rehabilitation staff by phone or in-person about the person's hospital stay, medications, rehab progress, outpatient follow-up appointments and goals of care. **Control:** The HOPE team identified a comparison group composed of all other patients on the internal medicine service who qualified for but did not receive a HOPE consultation.	3272: N= 302 11 people were readmitted within 30 days in the intervention group.	3272: N=1016 16 people were readmitted within 30 days within the comparison group.	3272: For every 100 people who receive the HOPE intervention, 3 more people will be readmitted within 30 days after discharge (ranges from 0 more to 8 more).		3272: Krol et al., 2018
							10018: USA	10018**: Intervention:** Geriatric Resources for Assessment and Care of Elders (GRACE) intervention for veterans 65 and older transitioning home after an acute hospitalization. The GRACE intervention included:	10018: N=179 12 months before index hospitalization = 49/166 (29.5%)	10018: N=77 12 months before index hospitalization = 9/51 (17.6%)	10018: The study reported that enrollment in GRACE was associated with 14.8% fewer 30-day readmissions.		10018: Schubert et al., 2016

Quality assessment							Study details		No. of Participants		Reported Effects/ Outcomes	Certainty	Reference
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
								- a home visit within 7 days post discharge and a geriatric assessment at home 3-4 weeks later by a NP and social worker (SW); - a consult by the NP and SW about the findings with the GRACE interdisciplinary panel at the Veteran Affairs Medical Center (VAMC); - development of a care plan with input from the interdisciplinary panel and primary care physicians from participating VAMC clinics; - Follow-up visits on a monthly, or as needed basis by the NP and SW to continue participation in the veteran's care **Control:** Veterans from a primary care clinic that was not participating in the program but who otherwise met enrollment criteria.	12 months after GRACE= 69/360 (19.2%) **Note:** The denominator indicates the total number of acute care hospital admissions, including the index hospitalization, and the numerator indicates the number of those hospitalizations that had a readmission within 30 days	12 months after hospitalization with standard care= 33/162 (20.4%)			
							19025: USA	19025**: Intervention:** Extension for Community Healthcare Outcomes (ECHO) Care Transitions (CT) video-conference sessions for older adults transitioning from hospital to a rehabilitation facility. The intervention group consisted of persons discharged to a rehabilitation facility who were discussed during an ECHO-CT session. ECHO-CT video-conference sessions were conducted weekly for 1.5 hours, and consisted of discrete, 15-minute, face-to-face discussions between the hospital and rehabilitation facility care teams using video communication technology. The discussion included a summary of hospital course, update on patient's condition, medication review, and	19025: Total N= 361 30d readmission rate, n (%) ECHO-CT Preintervention (year 2013) = 39/213 (18.3%) ECHO-CT Postintervention (year 2014) = 23/148 (15.5%)	19025: Total N= 434 30d readmission rate, n (%) Standard care Preintervention (year 2013) = 40/220 (18.2%) Standard care Postintervention (year 2014) = 52/214(24.3%)	19025: The study reported that 30-day readmission rates were lower in the intervention group than in the standard care group (OR 0.57; 95% CI, 0.34-0.96) For every 100 people who receive ECHO-CT video conference sessions, 9 less people will be readmitted within 30 days of discharge (ranges from 14 less to 0 more).		19025: Moore et al., 2017

Quality assessment							Study details		No. of Participants		Reported Effects/ Outcomes	Certainty	Reference
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
								concerns/questions related to the care plan. **Control:** The standard-care group consisted of persons discharged from the hospital to another (non-ECHO-CT partner) rehabilitation facility.					
							2245: France	2245: **Intervention**: Participants were transitioning from an acute medicine unit in a hospital to home. The hospitalist contacted the patient's primary care physician by telephone within 72h prior to discharge, making a maximum of 3 call attempts. The phone exchange had to contain the key elements of hospitalization: reason and duration of hospitalization, medical care, drug changes, social care, date of discharge, and all necessary information to provide the follow-up. **Control**: The control group consisted of patients for whom calls where not completed. The hospitalist did not attempt to call the primary care physician.	2245: N=196 Number of Hospital readmissions within 30 days: 36 (18%)	2245: N=79 Number of Hospital readmissions within 30 days: 16 (20.2%)	2245: No important differences were observed for readmissions within 30 days in the intervention group compared to the control group.		2245: Enzinger et al., 2021
1	Non-randomized, single arm study	Serious [b]	Not serious	Not serious	Not serious [j]	Undetected		3194: **Intervention:** The Careggi Re-Engineered Discharge (CaRED) intervention was designed to support adults transitioning home from a high complexity medicine ward in a teaching hospital. CaRED is a restructured discharge protocol, that involves direct communication between hospitals and general practitioners (GP) in primary care. GPs received an email informing them that one of their patients was hospitalized. The email authorized the GP to access the teaching hospital electronic health record throughout the patient's	3194: Pre-intervention N=832 hospitalizations # of hospital readmissions within 30 days: 139 (19.4%) Post-intervention: N=717 hospitalizations	3194: No true control group	3194: The 30-day hospital readmission rate decreased in the post-intervention period (19.4% vs. 14.4%).	3194: ⊕◯◯◯ Very low	3194: Paolini et al., 2022

Quality assessment							Study details		No. of Participants		Reported Effects/ Outcomes	Certainty	Reference
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Country	Intervention	Intervention	Control			
								hospitalization. The GPs had also a chat available to directly contact and discuss health data and healthcare decisions with hospital staff. At discharge, GPs received an e-mail with the discharge letter, directly alerting them of the discharge. **Control:** There was no control group, and results were compared pre and post intervention.	# of hospital readmissions within 30 days: 120 (14.4%)				

Acronyms
CI = Confidence interval
GP = General Practitioner
IRR = Incidence rate ratio
RCT = Randomized controlled trial
SD = Standard deviation

Explanations
a. Based on the risk-of bias-tool for randomized trials (RoB 2), the study had some concerns about risk of bias due to deviations from the intended intervention. We downgraded by 0.5.
b. The study was assessed using the ROBINS-I tool for non-RCT studies, and had serious risk of bias due to lack of control for confounding variables and deviations from the intended intervention. We downgraded by 1.5
c. The total number of events was less than the optimal number of 300. We downgraded by 1.
d. Based on the quality appraisal using the ROBINS-I tool, the expert panel systematic observation data had very serious risk of bias. We downgraded by 2.
e. Based on expert panel systematic observation data, there was variation in the direction of effect for this outcome. We downgraded by 1.
f. Based on expert panel systematic observation data, the number of participants was far less than the optimal size of 800. We downgraded by 2.
g. The total number of participants was greater than 800 but the number of events was slightly less than 300. We downgraded by 0.5.
h. Based on the quality appraisal using the ROBINS-I tool for non-RCT studies, all four studies had a very serious risk of bias due to lack of control for confounding variables, participant selection, deviations from the intended interventions and missing data. We downgraded by 2.
i. There was variation in the direction of effect for this outcome. There was also some variation in the tools used to collect data. We downgraded by 2.
j. The total number of events was slightly less than 300 (n=259). We downgraded by 0.5.